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TRAINING PLAY BEHAVIOR IN A 5-YEAR-OLD BOY WITH DEVELOPMENTAL DISABILITIES

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The purpose of the current study was twofold: (a) to investigate if it was possible to train three different games (both as a leader and as a participant) to a child with developmental disabilities through interaction with 4 typically developing peers, and (b) to examine if correct responding would be maintained after the training was faded. A multiple probe design across three games was used. The results showed that the child learned both skills as a leader and as a participant in all three games, and that skills were maintained for a period of 3 weeks after the training had stopped.

DESCRIPTORS: children, developmental disabilities, play behavior

Play is an activity that brings children into social contact with their peer group; they must listen to each other, discuss the play theme, make decisions about roles, show correct turn taking, help each other, share toys with each other, and so on. Children learn social skills through different play activities, and play might include any of the child's behavioral repertoires (e.g., motor, verbal, overt, covert, and all combinations thereof; Bijou, 1976). Games with special rules are common in both preschool and school, and are of great importance in socialization. Peer-mediated intervention has been one of the strategies used successfully to increase social interaction between children with and without disabilities in integrated settings. Goldstein, Kaczmarek, Pennington, and Shafer (1992) investigated the effects of a peer-mediated intervention on the social interaction in 5 preschoolers with autism and their typical peers. Peers were taught to attend to, comment on, and acknowledge the behavior of their classmates with disabilities. The study showed that total interaction between the peers and the children with disabilities increased with the intervention. In our study, we used typically developing peers to teach games with rules to a child with social and language disabilities. We wanted to investigate if it was possible to establish three different games through interaction with 4 typically functioning peers and if the target responses would be maintained over time.

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METHOD

Participants

Jon was a 5-year old boy with developmental disabilities. He could engage in sim-

ple symbolic and imitation games with 2- and 3-year old children, but he did not engage in games with special rules with same-age peers in preschool. Four typically functioning peer trainers, 4 to 5 years old, voluntarily participated in the study.

Setting and Design

The study took place in a playroom located in a preschool. One trainer, Jon, the typically functioning peers, and two observers were present in the play area during the baseline probes and the intervention phase. A multiple probe design across three games was used to assess intervention effects.

Games Selected for Intervention

The games chosen in this study were games usually played by children of this age at the preschool. Jon was trained both to be the leader and to be a participant in all three games.

Red light/green light. When the game started, the children stood at a wall in the room and looked at the leader. The leader stood in front of the children on the other side of the room. As the leader, Jon stood with his back to the children and counted for 10 s. He would then turn around and ask any children he saw moving to go back to the wall. When his role was as a participant, Jon moved forward from the wall to reach the leader, and stopped when, or before, the leader turned around. Jon was sent back to the wall when he was caught moving.

Simon says. Jon and peers wore clothes with several colors. The leader stood in front of the group and told the other children to move forward towards him with a number of giant elephant strides or small steps ("mouse steps") if they were wearing a particular color. Participants had to move the number and types of steps that the leader asked them to do depending on the color of clothes they were wearing.

Spin the bottle. All students sat in a circle. As the leader, Jon twirled the bottle. The leader then delivered an instruction to the child at whom the bottle was pointing. As a participant, Jon followed the leader's instruction or watched the other children as they played.

Response Measurement and Reliability

A task analysis was completed for each game, and each target behavior from the task analysis was listed on a checklist. The checklist was used by a trained observer for data-collection purposes. Examples of behaviors on the checklist included standing near the wall, giving instructions (e.g., "those who have red clothes, move to mouse steps"), following the instruction if the bottle pointed at him, moving against the leader and stopping when the leader turned around (a copy of the checklist may obtained from the first author upon request).

Two independent observers collected reliability data for all the baseline probes and for 30% of the sessions during the intervention phase. Interobserver agreement was calculated by dividing the number of agreements by the number of agreements plus disagreements and multiplying by 100%. Agreement averaged 90% (range, 80% to 100%).

Procedure

Baseline. During baseline conditions participants were told to play the games. No prompts or consequences were given.

Intervention. The intervention phase lasted 15 days. Each training session lasted 20 to 40 min, with a minimum of four trials and a maximum of 22 trials per session. The peers gave social consequences (i.e., smiles, nods, thumbs up, etc.) on correct responses by Jon during each game. Tokens were given after each game to all children by the teachers. These were exchanged for various items (e.g., tidbits, pearls) at the end of each session. All three games were task analyzed.

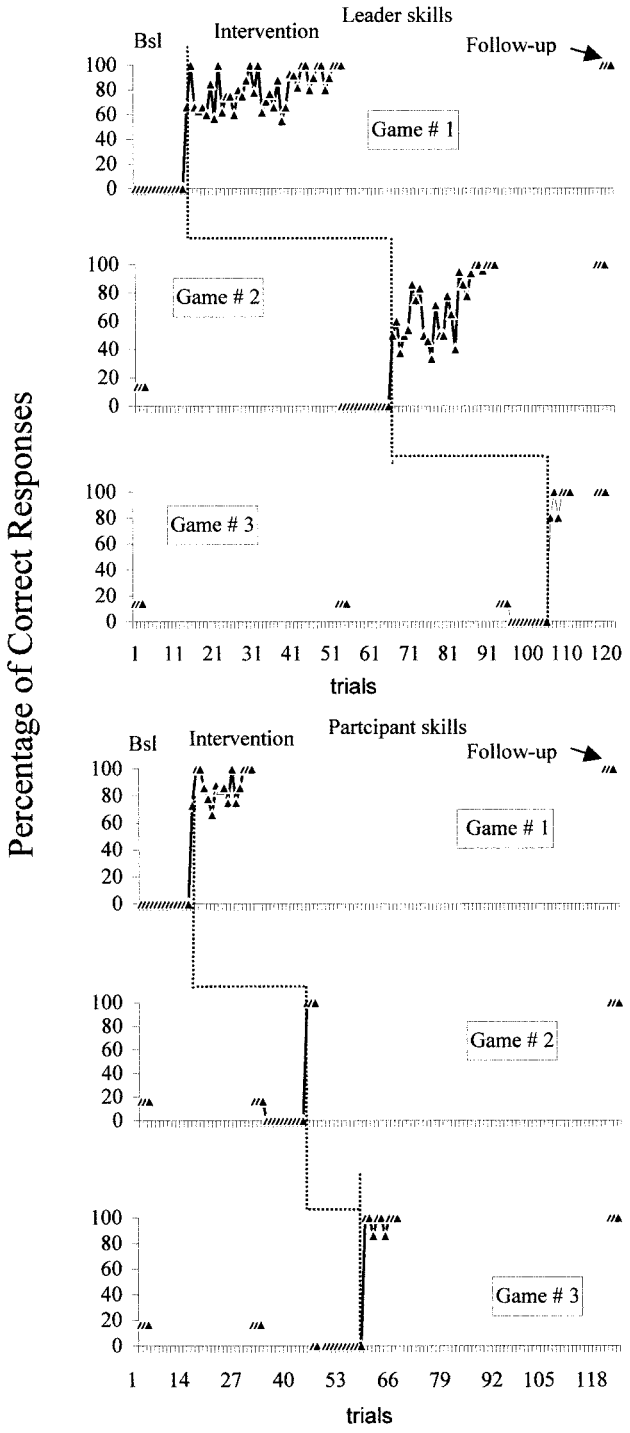

Figure 1. The upper panel shows percentage correct responding as a leader across the three games, and the lower panel shows percentage correct responding as a participant across the three games.

The teacher used a delay protocol incorporating both physical and verbal prompts to teach the steps of the games to Jon. In the next trial, Jon was prompted on the responses that he responded incorrectly to in the preceding trial. Training continued until Jon could perform each step of the task analyses, and the criterion was three consecutive trials with 100% correct responding.

Follow-Up

Follow-up data were collected 1, 2, and 3 weeks after reaching criterion performance on each game. No programmed consequences were delivered during the follow-up phase.

RESULTS AND DISCUSSION

As shown in Figure 1, Jon reached the performance criterion for the leader skills after 26 trials for the first game, 13 trials for the second game, and 19 trials for the third game. The performance level for the participant skills was reached after 50 trials for the first game, 37 trials for the second game, and 16 trials for the third game. The follow-up trials showed that the skills were maintained for periods of 1, 2, and 3 weeks.

As a leader, Jon had similar errors in "spin the bottle" and "Simon says," and he had the most errors in "red light/green light." As a participant, he had the same type of errors in all three games. Responding was faster in each game and also across games.

The results from the present experiment are in accord with interventions in which researchers have increased social interaction between typically functioning children and children with developmental disabilities (e.g., Goldstein et al., 1992; Thiemann & Goldstein, 2001). The present study showed that the procedure was effective in establishing three different games with special rules. Following training, Jon was observed to participate in these and other games in the school yard. He was also observed to interact more with peers in school. These observations, however, cannot be directly attributed to the intervention. Future research should systematically program for generalization to such play skills.

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